

Building Management System Upgrade and Telecomm Room HVAC

Uinta Basin Applied Technology College



State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building / Salt Lake City, Utah 84114 / 538-3018

DFCM PROJECT NO. 05080250 CONSTRUCTION DRAWINGS



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D

C

B

A

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
PLUMBING PIPING	
	COMBINATION WASTE AND VENT
	SOIL, WASTE - ABOVE GRADE
	SOIL, WASTE - BELOW GRADE
	GREASE WASTE - ABOVE GRADE
	GREASE WASTE - BELOW GRADE
	VENT
	ACID VENT
	ACID WASTE - ABOVE GRADE
	ACID WASTE - BELOW GRADE
	COLD WATER
	HOT WATER
	HOT WATER CIRCULATE
	180° HOT WATER
	180° HOT WATER RETURN
	160° HOT WATER
	160° HOT WATER RETURN
	RAINWATER - ABOVE GRADE
	RAINWATER - BELOW GRADE
	OVERFLOW RAINWATER ABOVE GRADE
	OVERFLOW RAINWATER BELOW GRADE
	STORM DRAIN
	VENT THRU ROOF
	NON POTABLE WATER
	EXISTING PIPE
	EXISTING PIPE TO BE REMOVED
	IRRIGATION WATER
	SANITARY SEWER
	WATER
	PURE WATER SUPPLY
	PURE WATER RETURN
	GAS
	PROPANE
	VACUUM
	COMPRESSED AIR
	MEDICAL AIR
	OXYGEN
	NITROUS OXIDE
	NITROGEN
	CARBON DIOXIDE
	EVACUATION

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
HVAC PIPING	
	HIGH PRESSURE STEAM
	MEDIUM PRESSURE STEAM
	LOW PRESSURE STEAM
	HIGH PRESSURE RETURN
	MEDIUM PRESSURE RETURN
	LOW PRESSURE RETURN
	PUMP DISCHARGE
	HOT WATER SUPPLY
	HOT WATER RETURN
	TEMPERED WATER SUPPLY
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	REFRIGERANT LIQUID
	REFRIGERANT SUCTION
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	DRAIN LINE
	HOT GAS BYPASS
	GLYCOL SUPPLY
	GLYCOL RETURN
	FUEL OIL SUCTION
	FUEL OIL RETURN
	FUEL OIL VENT
	EXISTING PIPE
	EXISTING PIPE TO BE REMOVED

ABBREVIATIONS			
NOTE: ALL ABBREVIATIONS MAY NOT BE USED			
AD AIR COND APD BD BHP BTU BTU/H CFH CFM CLG COMP COND	ACCESS DOOR AIR CONDITION(-ING, -ED) AIR PRESSURE DROP BALANCING DAMPER BRAKE HORSE POWER BRITISH THERMAL UNIT BTU/HOUR CUBIC FEET PER HOUR CUBIC FEET PER MINUTE COOLING COMPONENT CONDENSE(-ER, -ING, -ATION) CONTROL VALVE COLD WATER DIAMETER DISCHARGE DEPTH OR DEEP DRY BULB TEMPERATURE EXISTING ENERGY EFFICIENCY RATIO EFFICIENCY ETHYLENE GLYCOL ELECTRIC ELEVATION ENTERING EVAPORAT(-E, -ING, -ED, -OR) ENTERING WATER TEMPERATURE EXTERNAL FUTURE FAHRENHEIT FLEXIBLE CONNECT(-OR, -ION) FIRE DAMPER FULL LOAD AMPS FINS PER INCH FEET PER MINUTE FEET PER SECOND FIRE SMOKE DAMPER FEET GALLON(S) GALLONS PER HOUR GALLONS PER MINUTE HEAD MERCURY HOUR HEIGHT HEATING HORSE POWER HOT WATER HERTZ(FREQUENCY) ID INSIDE DIAMETER IN INCH KILOWATT LEAVING AIR TEMPERATURE POUNDS LENGTH LATENT HEAT LOCKED ROTOR AMPS LVA LEAVING WATER TEMPERATURE MAXIMUM THOUSAND BTU PER HOUR	MCA MFR MIN N/A NC NC NIC NO NPSH NTS OA OD OZ PD PG PH PPM PRESS PSF PSI PSIA PSIG R RA RECIRC REFR REQD RLA RPM RW SA SC SCFM SCW SF SH SL SP SPECS(S) SQ STD STM TEMP TD THERM TOT TSTAT V VAC VAV VEL VENT VERT VFD VOL WC WG WPD WTR WT WB YR	MINIMUM CIRCUIT AMPS MANUFACTURER MINIMUM NOT APPLICABLE NORMALLY CLOSED NOISE CRITERIA NOT IN CONTRACT NORMALLY OPEN NET POSITIVE SUCTION HEAD NOT TO SCALE OUTSIDE AIR OUTSIDE DIAMETER OUNCE PRESSURE DROP OR DIFFERENCE PROPYLENE GLYCOL PHASE PARTS PER MILLION PRESSURE POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PSI ABSOLUTE PSI GAUGE THERMAL RESISTANCE RETURN AIR RECIRCULATE REFRIGERATION REQUIRED RATED --- AMPS REVOLUTIONS PER MINUTE RAINWATER SUPPLY AIR SHADING COEFFICIENT STANDARD CUBIC FEET PER MINUTE SOFT COLD WATER SAFETY FACTOR SENSIBLE HEAT SEA LEVEL STATIC PRESSURE SPECIFICATION(S) SQUARE STANDARD STEAM TEMPERATURE TEMP. DROP OR DIFF. THERMAL TOTAL THERMOSTAT VOLT VACUUM VARIABLE AIR VOLUME VELOCITY VENT, VENTILATION VERTICAL VARIABLE FREQUENCY DRIVE VOLUME WATER COLUMN WATER GAUGE WATER PRESSURE DROP WATER WEIGHT WET BULB TEMP YEAR

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
VALVES, METERS, AND GAUGES	
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTO 2-WAY VALVE
	AUTO 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	CHAIN OPERATED GATE VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
	SOLENOID VALVE
	ANGLE VALVE
	VENTURI
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE (REFRIG.)
	GAS COCK
	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	VICTUALIC COUPLING
	REDUCER CONCENTRIC
	REDUCER ECCENTRIC
	REFRIGERANT SITE GLASS
	REFRIGERANT STAINER
	REFRIGERANT FILTER DRIER
	90° ELBOW UP
	90° ELBOW DOWN
	90° TEE UP
	90° TEE DOWN
	UNION
	CAPPED PIPE
	ANCHOR
	FLOAT AND THERMOSTATIC TRAP

HVAC SYMBOLS	
	THERMOSTAT
	TEMPERATURE SENSOR
	HUMIDISTAT
PLUMBING SYMBOLS	
	CATCH BASIN
	MANHOLE
	WALL HYDRANT
	HOSE BIBB
	CLEANOUT TO GRADE
	FLOOR CLEANOUT
	WALL CLEANOUT
	1/2 GRATE
	3/4 GRATE
	FULL GRATE

SYMBOL LEGEND		
SYMBOL	DESCRIPTION	
DUCTWORK		
SINGLE LINE	DOUBLE LINE	DESCRIPTION
		RECTANGULAR SUPPLY DUCT UP
		RECTANGULAR SUPPLY DUCT DOWN
		RECTANGULAR RETURN DUCT UP
		RECTANGULAR RETURN DUCT DOWN
		RECTANGULAR EXHAUST DUCT UP
		RECTANGULAR EXHAUST DUCT DOWN
		ROUND DUCT UP
		ROUND DUCT DOWN
		ACCOUSTICALLY LINED RECTANGULAR DUCT
		90° RECTANGULAR ELBOW WITH TURNING VANES
		90° RADIUS ELBOW R=1.5
		DUCT SIZE OR SHAPE TRANSITION
		OPPOSED BLADE BALANCING DAMPER (O.B.D.) IN RECT DUCT
		BUTTERFLY BALANCING DAMPER IN ROUND DUCTS
		COMBINATION TEE
		SPLITTER DAMPER
		SQUARE OR RECTANGULAR CEILING DIFFUSER
		ROUND CEILING DIFFUSER
		SIDEWALL REGISTER SUPPLY OR RETURN
		ROUND FLEXIBLE DUCT
		RETURN GRILLE
		EXHAUST GRILLE
		FIRE/SMOKE DAMPER
		FIRE DAMPER
		SMOKE DAMPER
		FLEXIBLE CONNECTION
		EXISTING DUCT
		DUCT TO BE REMOVED

GENERAL MECHANICAL NOTES	
1.	ALL CEILING DIFFUSERS SHOWN AS SUCH ARE CD-1, CFM AS NOTED, UNLESS OTHERWISE NOTED. REFER TO DETAIL B4/ME501.
2.	ALL CEILING RETURN GRILLES SHOWN AS SUCH ARE RG-1 UNLESS OTHERWISE NOTED. PROVIDE SOUND BOOT PER DETAIL C4/ME501.
3.	ALL CEILING EXHAUST GRILLES SHOWN AS SUCH ARE EG-1, CFM AS NOTED, UNLESS OTHER-WISE NOTED.
4.	DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
5.	ALL DUCT DIMENSIONS ARE INSIDE FREE AREA DIMENSIONS. ADJUST SHEET METAL DIMENSION FOR LINED DUCT.
6.	ALL FIRE DAMPERS SHOWN ARE 1-1/2 HOUR UNLESS OTHERWISE NOTED.
7.	IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
8.	PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, VAV BOXES, FIRE DAM- PERS, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
9.	STEEL ROOF DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT, UNLESS NOTED OTHERWISE. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHEN HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED; THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACCROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.
10.	TAG AND ID ALL EQUIPMENT.

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ELEVATION OR SECTION INDICATOR, INTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ROOM OR SPACE NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
	PLUMBING FIXTURE INDICATOR.
	DIFFUSER/GRILLE INDICATOR.
	DIFFUSER/GRILLE INDICATOR.
	BREAK, STRAIGHT
	BREAK, ROUND.
	MATCH LINE INDICATOR
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
	NEW CONNECTION POINT TO EXISTING

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MARK	DATE	DESCRIPTION
5		
4		
3		
2		
1		

ISSUE: CONDOC
DATE: 09/13/2005
DFCM PROJECT NO: 05080250
PROJECT NO: 20050564LJ
DRAWN BY: EXJ
CHECKED BY: SXS
DESIGNED BY: SXS
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SHEET TITLE
MECHANICAL
GENERAL NOTES &
SYMBOLS LEGEND

ME001
SHEET 2 OF 6

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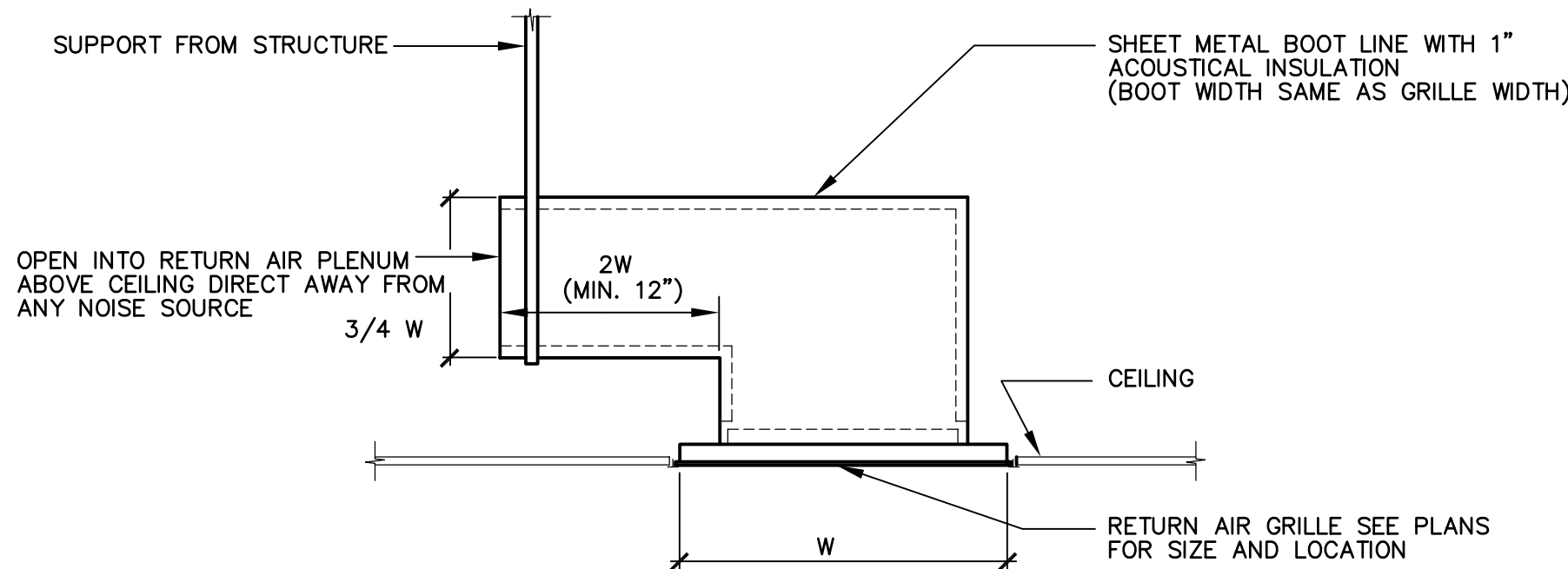
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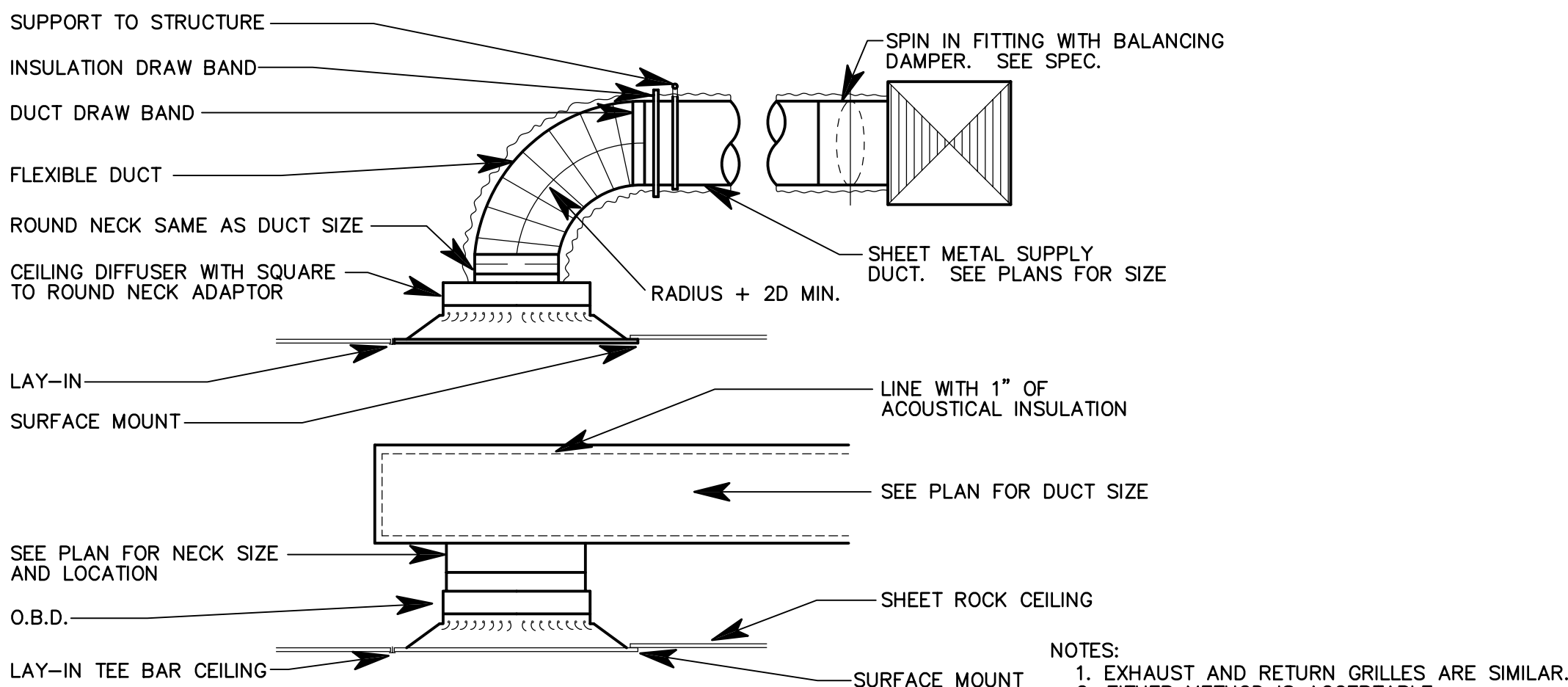
GRILLES, REGISTERS AND DIFFUSERS						
SYM	MANUF	MODEL	SIZE	MAX CFM	MAX NC	DESCRIPTION
CD-1	EH PRICE	SCDA	6 x 6	125	30	LOUVER FACE (4-CONE) CEILING DIFFUSERS. ADJUSTABLE AIR PATTERN, C.W./O.B.D. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE. PROVIDE ROUND NECK ADAPTER.
			9 x 9	250		
			12 x 12	425		
			15 x 15	625		
			18 x 18	900		
RG-1	EH PRICE	PDDR	10 x 10	350	30	PERFORATED FACE RETURN AIR UNIT, REMOVABLE FACE & CORE. FRAME SHALL BE FOR SURFACE OR LAY-IN MOUNTING AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES HSLL BE 24" x 24", 24" x 12" OR 12" x 12" AS REQUIRED TO FIT CEILING TILE SPACE AVAILABLE. AIR QUANTITY SHALL MATCH ROOM SUPPLY OR EXHAUST AIR QUANTITY.
			12 x 12	500		
			14 x 14	550		
			10 x 22	625		
			16 x 16	725		
			18 x 18	900		
			20 x 20	1000		
			22 x 22	1320		

ROOFTOP HEATING AND COOLING UNITS (NATURAL GAS)														
SYMBOL	MANUFACTURER	MODEL NO.	AIR FLOW (CFM)	EXT S.P. (IN W.G.)	CAPACITY (2) HEATING (MBH)		CAPACITY (2) COOLING (MBH)		MIN OUTSIDE AIR SETTING	ELECTRICAL		MAX WEIGHT (LBS)	MAX DIMENSION HxWxL (INCHES)	COMMENTS
					INPUT	OUTPUT	SENS	TOTAL		VOLTS/ PHASE/	MIN CIRCUIT AMP.			
RTU-1	CARRIER	48TMD006	1950	0.70	(74,000)	44990	47.66	48.52	200	208/3/60	28.9	750	74 x 45 x 34	(1) (2) (3) (4)
RTU-2	CARRIER	48TMD006	1950	0.70	(74,000)	44990	47.66	48.52	200	208/3/60	28.9	750	75 x 45 x 34	(1) (2) (3) (4)

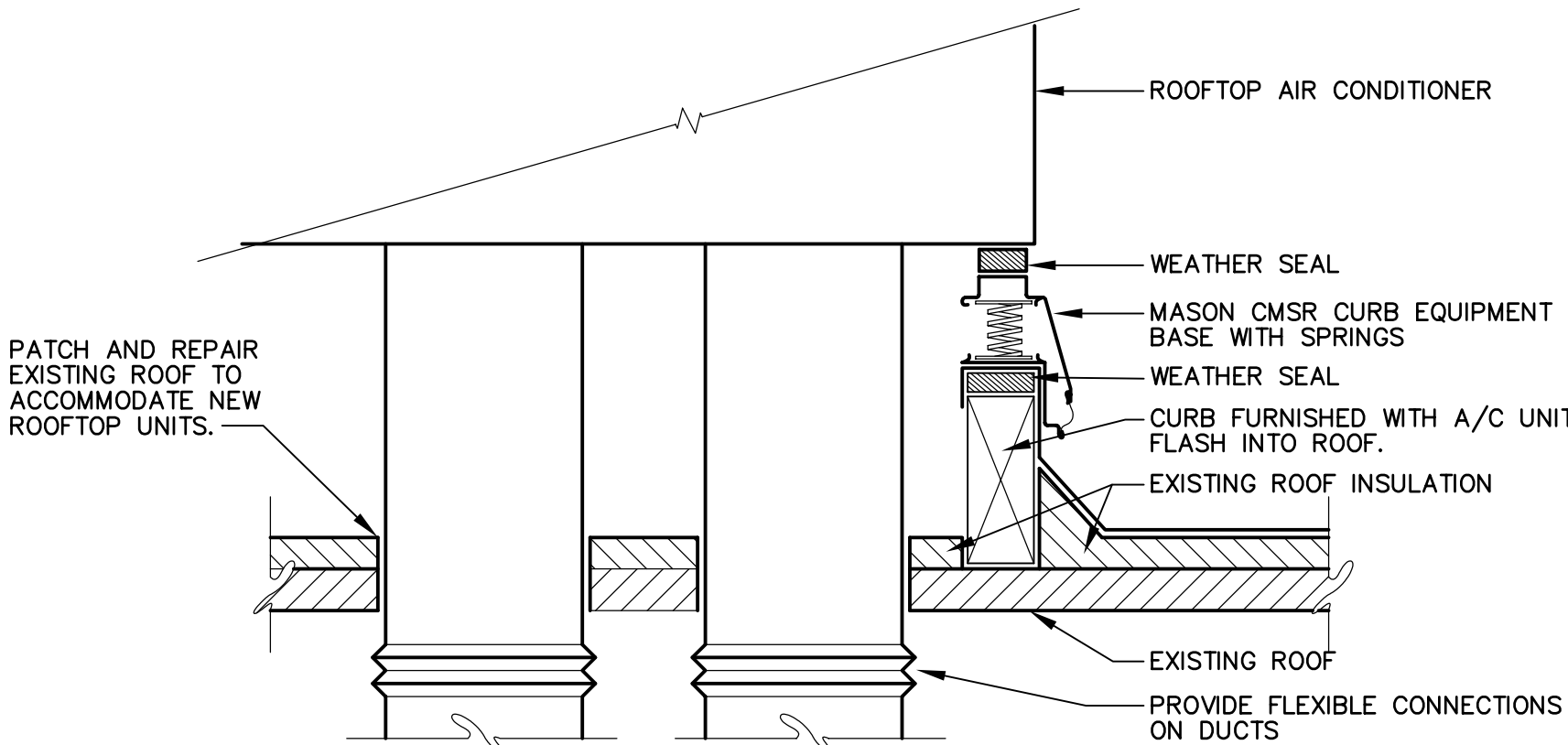
- (1) CAPACITIES BASED ON 5100 FEET ELEVATION. CAPACITIES IN () AT 0 FT. ELEVATION.
(2) 100% OUTSIDE AIR ECONOMIZER AND 100% FULLY MODULATING CENTRIFUGAL POWER EXHAUST
(3) BASED ON 95 DEG F AMBIENT TEMPERATURE, 80 DB / 62 WB ENT AIR TEMP.
(4) PROVIDE SPRING VIBRATION ISOLATION CURB.



C4 RETURN AIR SOUND BOOT DETAIL
SCALE: NOT TO SCALE



B4 CEILING DIFFUSER DETAIL
SCALE: NOT TO SCALE



A4 ROOFTOP UNIT ON SPRING BASE DETAIL
SCALE: NOT TO SCALE



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MARK DATE DESCRIPTION

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SHEET TITLE

MECHANICAL
SCHEDULES
& DETAILS

ME501

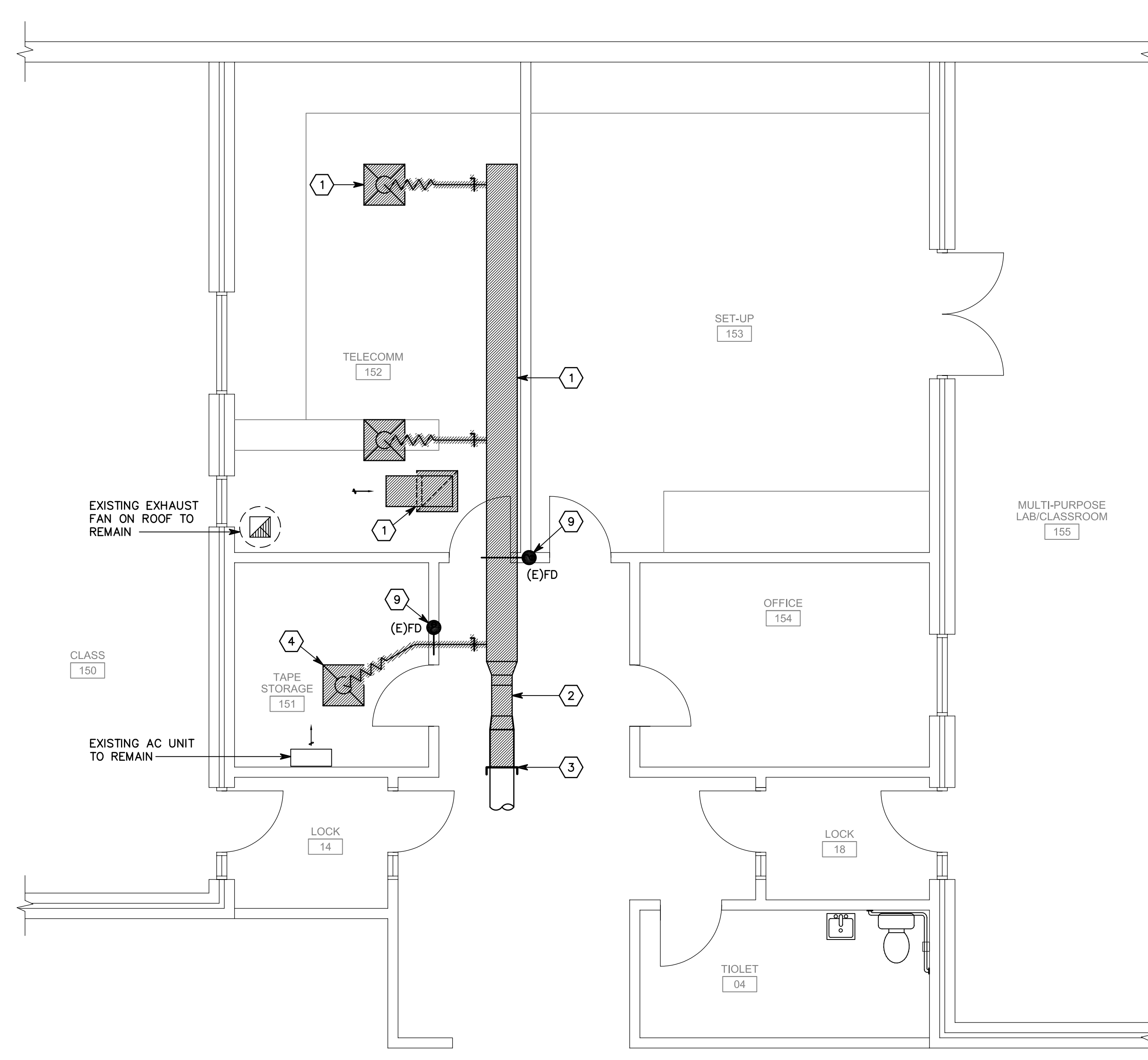
SHEET 3 OF 6

GENERAL NOTES

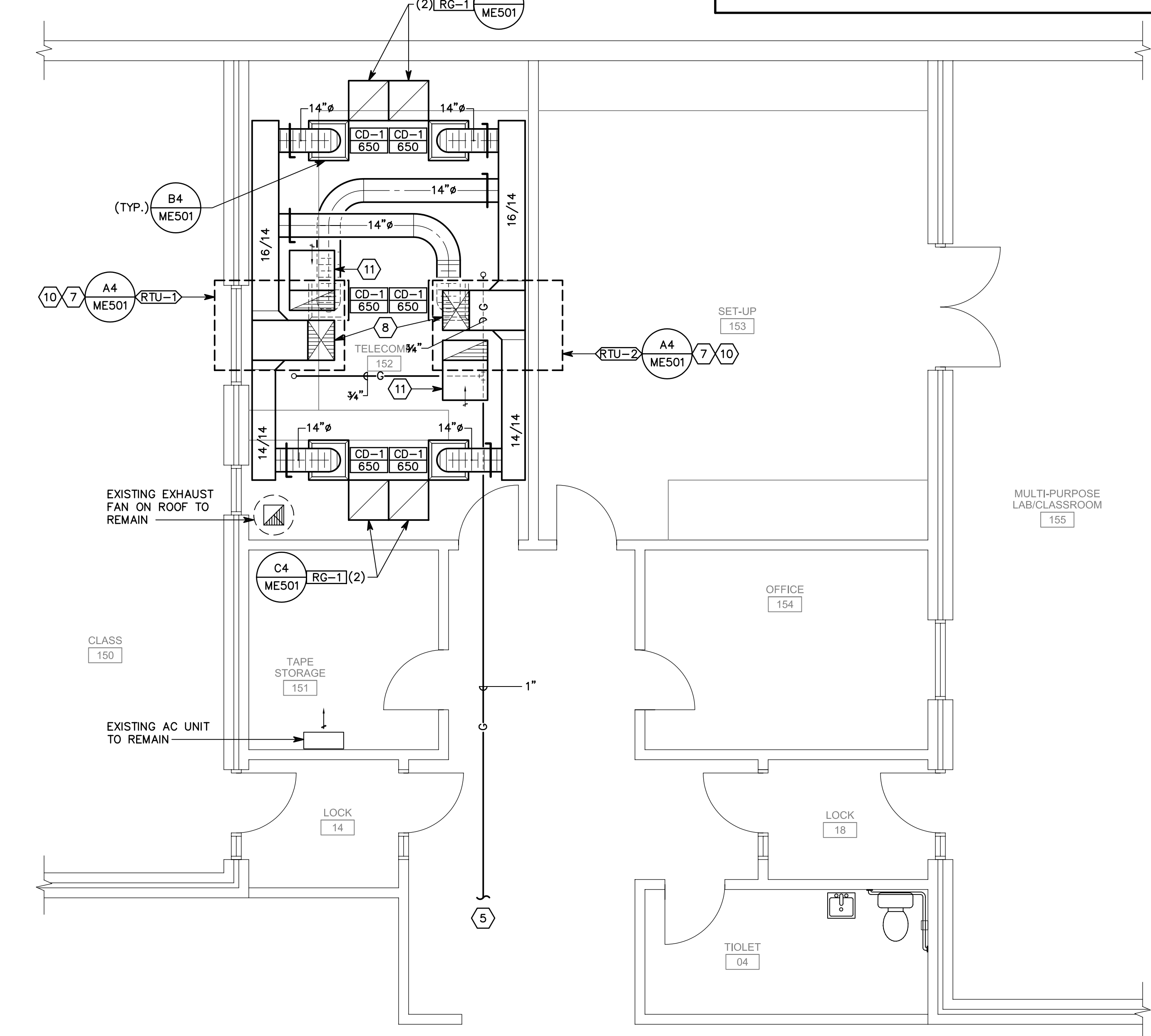
- DO NOT REMOVE EXISTING HEATING AND COOLING SYSTEM UNTIL A MINIMUM OF ONE ROOFTOP UNIT SYSTEM IS FULLY OPERATIONAL (HEATING AND COOLING).

SHEET KEYNOTES

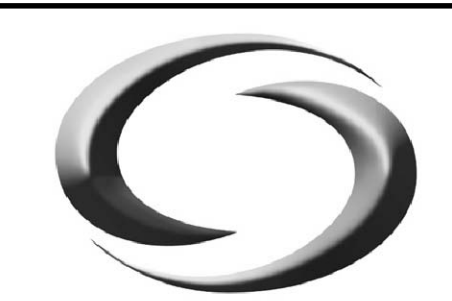
- REMOVE EXISTING DUCTWORK, GRILLES AND DIFFUSERS AS SHOWN HATCHED.
- REMOVE EXISTING VAV REHEAT BOX. RETURN TO OWNER. CAP HEATING WATER BRANCH LINES. REMOVE VALVES AND BRANCH PIPING TO BOX.
- CAP EXISTING MEDIUM PRESSURE DUCT. SEAL AIR TIGHT.
- REMOVE DIFFUSER AND ASSOCIATED DUCTWORK.
- ROUTE GAS PIPING IN EXISTING CEILING SPACE. EXTEND AND CONNECT GAS PIPING FROM 3-INCH GAS LINE LOCATED IN MECHANICAL ROOM ON SOUTH SIDE OF BUILDING (APPROX 120 FEET TO SOUTH) TO NEW ROOFTOP UNITS. PROVIDE SHUT-OFF VALVE AT CONNECTION TO MAIN.
- EXTEND GAS PIPING THRU ROOF TO UNITS. FLASH AND SEAL TIGHT ROOF PENETRATION.
- ROOFTOP OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIMUM 10 FEET FROM ANY VENTS, FLUES OR EXHAUST.
- EXTEND AND CONNECT SUPPLY AND RETURN AIR DUCT TO UNIT. TRANSITION DUCT AS NECESSARY. PROVIDE FLEXIBLE DUCT CONNECTION.
- REMOVE EXISTING FIRE DAMPER. PATCH AND REPAIR FIRE RATED WALL TO MAINTAIN WALL FIRE RATING.
- COORDINATE LOCATION OF ROOFTOP UNITS WITH EXISTING STRUCTURE. LOCATE UNITS TO OVERLAP STRUCTURE.
- PROVIDE AND INSTALL SOUND BOOT AT RETURN AIR CONNECTION.



(A1) MECHANICAL DEMOLITION FLOOR PLAN
SCALE: 1/4" = 1'-0"



(A3) MECHANICAL FLOOR PLAN
SCALE: 1/4" = 1'-0"



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SHEET TITLE
MECHANICAL
DEMOLITION PLAN
AND
MECHANICAL PLAN

MH101
SHEET 4 OF 6

D

C

B

A

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ROOM OR SPACE NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING.
	BREAK, ROUND.
	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE.
	PROPERTY LINE: DASHED, WDE LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
WIRING METHODS	
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT SCHEDULE. FOR BRANCH WIRING USE #12 CONDUCTORS, EXCEPT #10 CONDUCTORS SHALL BE INSTALLED IF DISTANCES EXCEED THOSE SPECIFIED IN SECTION 16120.
	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
	JUNCTION BOX.
	JUNCTION BOX, CEILING OUTLET.
	EARTH GROUND (ONE-LINE DIAGRAM).
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.
	RECEPTACLE, DUPLEX, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, QUADRAPLEX: NEMA 5-20R.
	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.
	RECEPTACLE, RANGE: NEMA 10-50R.
	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
	SWITCH, DIMMER.
	SWITCH, SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED).
	SWITCH, THREE-WAY ("x" INDICATES FIXTURES CONTROLLED).
	SWITCH, FOUR-WAY ("x" INDICATES FIXTURES CONTROLLED).
SITE ELECTRICAL AND COMMUNICATIONS UTILITIES	
	ELECTRIC LINE: THIN LINE. 1ø = SINGLE PHASE, 2ø = 2-PHASE, 3ø = 3-PHASE, 0 = OVERHEAD, U = UNDERGROUND, P = PRIMARY, S = SECONDARY
	UTILITY POLE.
ELECTRICAL POWER AND DISTRIBUTION	
	FUSE WITH RATING (ONE-LINE DIAGRAM).
	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).

D

C

B

A

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION (ONE-LINE DIAGRAM).
	OVERLOAD RELAY (ONE-LINE DIAGRAM).
	STARTER (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	EXHAUST FAN OUTLET.
	TRANSFORMER (ONE-LINE DIAGRAM).
	TRANSFORMER, CURRENT (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	METER.
	AERIAL SERVICE WEATHER HEAD (ONE-LINE DIAGRAM).
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	PANELBOARD CABINET, FLUSH MOUNTED.
	DISTRIBUTION PANEL OR SWITCHBOARD.
LIGHTING (REFER TO THE FIXTURE LEGEND FOR FIXTURE SYMBOLS)	
	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES FIXTURE TYPE AS SCHEDULED.
	EMERGENCY.
	NIGHT LIGHT: DO NOT SWITCH.
	EGRESS DIRECTION ARROW.
LIGHTING CONTROL	
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, CEILING.
	OCCUPANCY SENSOR, DUAL TECHNOLOGY, WALL.
STRUCTURED CABLING	
	TELEPHONE, WALL MOUNTED ("X" INDICATES QUANTITY OF CABLES).
	TELEPHONE, WALL MOUNTED: PAY PHONE.
	TELEPHONE, WALL MOUNTED: WALL PHONE.
	OUTLET, DATA COMMUNICATION ("X" INDICATES QUANTITY OF CABLES).
	OUTLET, BUILDING STANDARD COMBINATION TELEPHONE/ DATA COMMUNICATION.
	TELEPHONE TERMINAL BOARD, FIRE TREATED PLYWOOD PAINTED.
	VOICE/DATA OUTLET ("A" INDICATES NUMBER OF TELEPHONE AND "B" INDICATES NUMBER OF DATA CABLES).
FIRE ALARM	
	FIRE SYSTEM ANNUNCIATOR.
	FIRE ALARM CONTROL PANEL, SEMI-RECESSED.
	FIRE ALARM NOTIFICATION POWER SUPPLY.
	CONTROL MODULE.
	MONITOR MODULE.

D

C

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A

SYMBOL LEGEND	
SYMBOL	DESCRIPTION
FIRE ALARM	
	FIRE ALARM MANUAL PULL STATION.
	SHUT DOWN RELAY: INSTALL RELAY IN CONTROL CIRCUIT OF EQUIPMENT TO BE CONTROLLED IN THE EVENT OF A FIRE.
	DETECTOR, SMOKE.
	STROBE. SUBSCRIPT INDICATES CANDELA RATING.
	ALARM, HORN/SPEAKER, WEATHERPROOF.
	ALARM, HORN/STROBE, ONE ASSEMBLY. SUBSCRIPT INDICATES CANDELA RATING.
	SMOKE DAMPER.
ABBREVIATIONS	
NOTE: ALL ABBREVIATIONS MAY NOT BE USED.	
1P 1PH 1WAY 2/C 2WAY 3/C 3PH 3WAY 4OUT	SINGLE POLE SINGLE-PHASE ONE-WAY TWO-CONDUCTOR TWO-WAY THREE-CONDUCTOR THREE-PHASE THREE-WAY QUADRUPL RECEPTACLE OUTLET FOUR-POLE DOUBLE THROW FOUR-POLE SINGLE THROW FOUR-WIRE FOUR-WAY ARMORED CABLE AMERICANS WITH DISABILITIES ACT ADJACENT ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AMPERE INTERRUPTING CAPACITY ALUMINUM AMPERE ANNUNCIATOR AMPS SHORT CIRCUIT AUTOMATIC TRANSFER SWITCH AUDIO VISUAL AMERICAN WIRE GAGE BUCK-BOOST TRANSFORMER COMMUNITY ANTENNA TELEVISION CIRCUIT BREAKER CUSTOM COLOR AS SELECTED BY ARCHITECT CLOSED CIRCUIT TELEVISION CUSTOM FINISH AS SELECTED BY ARCHITECT CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED CONTRACTOR FURNISHED/ OWNER INSTALLED CIRCUIT CONSTRUCTION MANAGER CONDUIT CONVENIENCE OUTLET CONTRACTING OFFICER'S REPRESENTATIVE CONTROL PANEL CURRENT TRANSFORMER CABLE TELEVISION COPPER UNIT OF SOUND LEVEL DOUBLE POLE DOUBLE THROW DISCONNECT SWITCH EACH EMERGENCY ELECTRICAL METALLIC TUBING ELECTRICAL NONMETALLIC TUBING EMERGENCY POWER OFF EQUIPMENT EXISTING FIRE ALARM FIRE ALARM CONTROL PANEL FULL LOAD AMPS FLEXIBLE METAL CONDUIT FREIGHT ON BOARD FULL VOLTAGE NON-REVERSING FULL VOLTAGE REVERSING GROUND GENERATOR GROUND FAULT CIRCUIT INTERRUPTER GROUND FAULT PROTECTION HEAVY DUTY HIGH INTENSITY DISCHARGE HAND-OFF-AUTOMATIC HORSE POWER HIGH POWER FACTOR HIGH PRESSURE SODIUM HIGH VOLTAGE HERTZ ISOLATED GROUND INTERMEDIATE METAL CONDUIT INSULATED/ISOLATED INPUT/OUTPUT INFRARED KILOVOLT KILOVOLT AMPERE KILOVOLT AMPERE REACTIVE
kW kWh LED LFMC LFNC LPS LRA LTG LV MATV MAX MC MCA MCB MCC MCP MDP MG MH MIN MLO MOCP NA NC NEC NEMA NFC NFPA NIC NL NO NTS OC OCP OF/Ci OF/Oi OFF OH DR OL PB PF PH PNL PT QTY R RCP RMC RNC RPM RR SCA SCBA SF SFBA SPDT SPEC SPST S/S ST SWBD SWGR TL TP TTB TV TVSS TYP UF UGND UPS V VA VFC W/ W/O WP XFMR	KILOWATT KILOWATT HOUR LIGHT EMITTING DIODE LIQUID TIGHT FLEXIBLE METAL CONDUIT LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT LOW PRESSURE SODIUM LOCKED ROTOR AMPS LIGHTING LOW VOLTAGE MASTER ANTENNA TELEVISION SYSTEM MAXIMUM METAL CLAD MINIMUM CIRCUIT AMPS MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTION MAIN DISTRIBUTION PANEL MOTOR GENERATOR MANHOLE MINIMUM MAIN LUGS ONLY MAXIMUM OVERCURRENT PROTECTION NOT APPLICABLE NORMALLY CLOSED NATIONAL ELECTRICAL CODE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION NATIONAL FIRE CODE NATIONAL FIRE PROTECTION ASSOCIATION NOT IN CONTRACT NIGHT LIGHT NORMALLY OPEN NOT TO SCALE ON CENTER OVER CURRENT PROTECTION OWNER FURNISHED/ CONTRACTOR INSTALLED OWNER FURNISHED/ OWNER INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETALLIC CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) START/STOP SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERFLOOR UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY VOLTS VOLT AMPERE VARIABLE FREQUENCY CONTROLLER WITH WITHOUT WEATHERPROOF TRANSFORMER

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DEFINITIONS	
NOTE: ALL DEFINITIONS MAY NOT BE USED.	
INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.	
DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.	
APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.	
FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."	
INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."	
PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."	
INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.	
ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...	

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GENERAL ELECTRICAL NOTES	
1.	CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
2.	OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM. A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT. B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER. C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
3.	EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
4.	SUBMITTALS: PROVIDE SUBMITTALS IN THREE RING BINDERS WITH JOB NAME, SUBCONTRACTOR, AND VOLUME ON THE BINDING. PREPARE TABS FOR EACH SPECIFICATION SECTION REQUIRING SUBMITTALS. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
5.	REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

GENERAL DRAWING NOTES		
1.	CONTRACTOR TO PROVIDE NEW CONDUIT AND CONDUCTOR TO RE-FEED PANELS SHOWN AS EXISTING. REFER TO ONE-LINE DIAGRAM.	
2.	EXISTING ELECTRICAL CONDITIONS: THERE ARE TWO CEILINGS IN THIS BUILDING. THIS PROJECT REQUIRES THE REMOVAL OF MOST OF BOTH OF THEM AND REINSTALLATION OF A NEW CEILING. THE LOCATION OF EXISTING CONVENIENCE OUTLETS AND THE CIRCUIT THAT POWERS THE OUTLET ARE SHOWN ON THE DRAWINGS. ENGINEER FIELD INVESTIGATED EACH ROOM VISUALLY AND WITH A CIRCUIT TRACER TO DETERMINE CIRCUITING. IN SOME ROOMS, AS NOTED, WE WERE UNABLE TO VERIFY ALL CIRCUITING BECAUSE OF EQUIPMENT, FURNISHINGS, AND/OR STORED ITEMS IN THE ROOM. IN ADDITION, THE ELECTRICAL DRAWINGS OF THE BUILDING WERE NOT AVAILABLE AND MOST OF THE CEILINGS ARE INACCESSIBLE. THEREFORE IT WAS NOT POSSIBLE TO VERIFY EXISTING WIRING AND RATING. A THREE STEP PROCESS SHALL BE FOLLOWED TO PREPARE BID AND ADJUST FOR ACTUAL CONDITIONS: a. ASSUME, FOR ALL WALL MOUNTED WIRING DEVICES AND EQUIPMENT, THAT THE OUTLET BOX AND RELATED CONDUIT CAN BE REUSED TO THE CEILING. ASSUME NEW CONDUCTORS, WIRING DEVICES AND PLATES TO A JUNCTION BOX IN THE CEILING. ASSUME NEW BRANCH WIRING AND SWITCHED LEGS WITH AN INDIVIDUAL CIRCUIT FOR EACH HOME RUN. ASSUME THAT ALL WIRING FOR LIGHT FIXTURES AND FOR SWITCHING THAT IS ABOVE CEILING IS NEW. b. DEMOLISH AND REMOVE ANY WIRING THAT CONFLICTS WITH THE INSTALLATION OF THE NEW MECHANICAL SYSTEMS, DUCTWORK, PIPING AND FIRE SPRINKLER SYSTEM, OR THAT IS OTHERWISE NOT TO BE REUSED. CONTRACTOR TO PROTECT ALL EXISTING CONDUITS IN CEILING SPACE AND WALLS DURING DEMOLITION. c. AFTER DEMOLITION OF EXISTING CEILING, SUBMIT RED LINE SHOP DRAWINGS SHOWING ALL WIRING THAT MAY BE REUSED AND ITS ROUTING, INDICATING WHETHER WIRING IS LOCATED UNDER SLAB, IN WALLS OR IN CEILING. ALLOW TWO WEEKS FOR ENGINEER TO PREPARE REVISED DRAWINGS SHOWING CIRCUITING TO BE REUSED AND NEW CIRCUITS. AT THIS POINT, PREPARE A PROPOSAL REQUEST GIVING CREDIT TO THE OWNER FOR ANY WIRING THAT IS REUSED (PER THE UNIT PRICE BID FORM) AND AN ADDITION FOR ANY WIRING THAT NEEDS TO BE REPLACED BUT WAS UNIDENTIFIED.	
3.	THIS PROJECT REQUIRES THE REMOVAL OF BOTH OF THE CEILINGS IN THE BUILDING AND REINSTALLATION OF A NEW CEILING. CONTRACTOR IS TO REMOVE ALL VOICE/DATA CABLING RUNNING THROUGH CEILING SPACE, EXCEPT AS NOTED ON THE DRAWINGS AND THOSE COMING UP THROUGH THE FLOOR IN THE TELEPHONE AND SERVER ROOMS. THE LOCATION OF EXISTING PHONE/DATA OUTLETS ARE SHOWN ON THE DRAWINGS.	
4.	CONTRACTOR TO REMOVE ALL INTERIOR LIGHT FIXTURES EXCEPT THOSE IN AREAS SHOWN TO "RETAIN EXISTING CEILING" ON ARCHITECTURAL REFLECTED CEILING PLAN. ALL EXTERIOR LIGHTING FIXTURES, CONTROLS AND WIRING TO REMAIN. CONTRACTOR TO TRACE CONDUITS FROM PANELS "1" & "B" FOR OUTDOOR LIGHTING AND PROTECT THEM DURING DEMOLITION. SEE CIRCUIT SCHEDULE FOR CIRCUITS.	
5.	ALL CONDUIT AND CONDUCTOR ABANDONED BY THIS PROJECT SHALL BE REMOVED BACK TO THE PANEL, WHICH FED THEM, OR TO THE FIRST EQUIPMENT STILL SERVED BY THE CIRCUIT.	

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EE001		
SHEET	5	OF 6

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EQUIPMENT SCHEDULE																															
MARK	QTY	ITEM DESCRIPTION	LOAD DATA						WIRE AND CONDUIT SIZE	OVERCURRENT PROTECTION			DISCONNECT			STARTER DATA														NOTES	MARK
			HP	kW	MCA	FLA	VOLT	PH		Hz	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	FURN BY	DEVICE	LOCATION	SIZE	SPEED	CTRL VOLT	SELECTOR SWITCH	PUSH BUTTON	PILOT LAMP	NORMALLY OPEN CONTACTS	NORMALLY CLOSED CONTACTS	PHASE FAILURE RELAY	SCHEMATIC REFERENCE		
RTU-1		ROOF TOP UNIT			28.9		208	3	60	3#6 THWN CU 1#10 GR, 1°C	E	50A/3P CB	PANEL	E	60A3P3F FRN-R-30	ADJ TO EQUIP	Q													**2, 3	RTU-1
RTU-1		ROOF TOP UNIT			28.9		208	3	60	3#6 THWN CU 1#10 GR, 1°C	E	50A/3P CB	PANEL	E	60A3P3F FRN-R-30	ADJ TO EQUIP	Q													**2, 3	RTU-1

NOTES
1 FOR MOTORS LESS THAN 1 HP, IF MOTOR NAMEPLATE SHOWS THE MOTOR TO BE THERMALLY PROTECTED, A DISCONNECT MAY BE SUBSTITUTED FOR THE THERMAL SWITCH.
2 DISCONNECT TO BE NEMA 3R
3 PROVIDE FUSES SIZED TO NAMEPLATE DATA ON MOTOR

EQUIPMENT SCHEDULE KEY	
E	DIVISION 16
Q	FURNISHED WITH THE EQUIPMENT
*	COORDINATE WITH THE DIVISION 15 TEMPERATURE CONTROL INSTALLER
**	AUTOMATIC CONTROL WIRING BY DIVISION 15
HP	HORSE POWER. IF MOTORS UNDER 1HP ARE SHOWN TO BE THERMALLY PROTECTED ON THEIR NAMEPLATES, A NON-FUSED DISCONNECT SWITCH MAY BE SUBSTITUTED FOR THE THERMAL SWITCH.
HOA	HAND OFF AUTO SWITCH
RTU	DISCONNECT SWITCH LOCATED AT ROOF TOP UNIT
STD	MANUFACTURER'S STANDARD
TBD	TO BE DETERMINED BY CONTRACTOR BASED ON EQUIPMENT FLA RATING ON NAMEPLATE
CC#	CONDUCTOR & CONDUIT SCHEDULE SYMBOL NUMBER
##A	FRAME SIZE OF DISCONNECT SWITCH
##AF	AMP RATING OF FUSES IN FUSED DISCONNECT SWITCH
NF	NON FUSED DISCONNECT SWITCH
#P	# OF POLES

GENERAL SHEET NOTES

1. LOCATION OF ALL MECHANICAL AND ELECTRICAL EQUIPMENT SHOWN IS APPROXIMATE CONTRACTOR TO FIELD VERIFY.

SHEET KEYNOTES

- TO PANEL IN ELECTRICAL ROOM.
- CONDUIT AND CONDUCTOR AS PER EQUIPMENT SCHEDULE TO MDS-2 OR MDS-1.
- PROVIDE NEW 50 A/3P CIRCUIT BREAKERS IN EITHER MDS-1 OR MDS-2 TO MATCH THOSE EXISTING. CONTRACTOR TO VISIT SITE AND EXAMINE PANELS PRIOR TO BID TO DETERMINE COST OF PROVIDING NEW BREAKERS FOR EXISTING PANEL.
- 3 EA #10 THHN IN 3/4" CONDUIT TO SPARE CIRCUIT IN PANEL PP1, TV, MP, OR LP. CONTRACTOR TO VISIT SITE PRIOR TO BID TO DETERMINE WHICH SPARE TO USE. PROVIDE NEW CIRCUIT BREAKER AS REQUIRED.
- EQUIPMENT ON ROOF.



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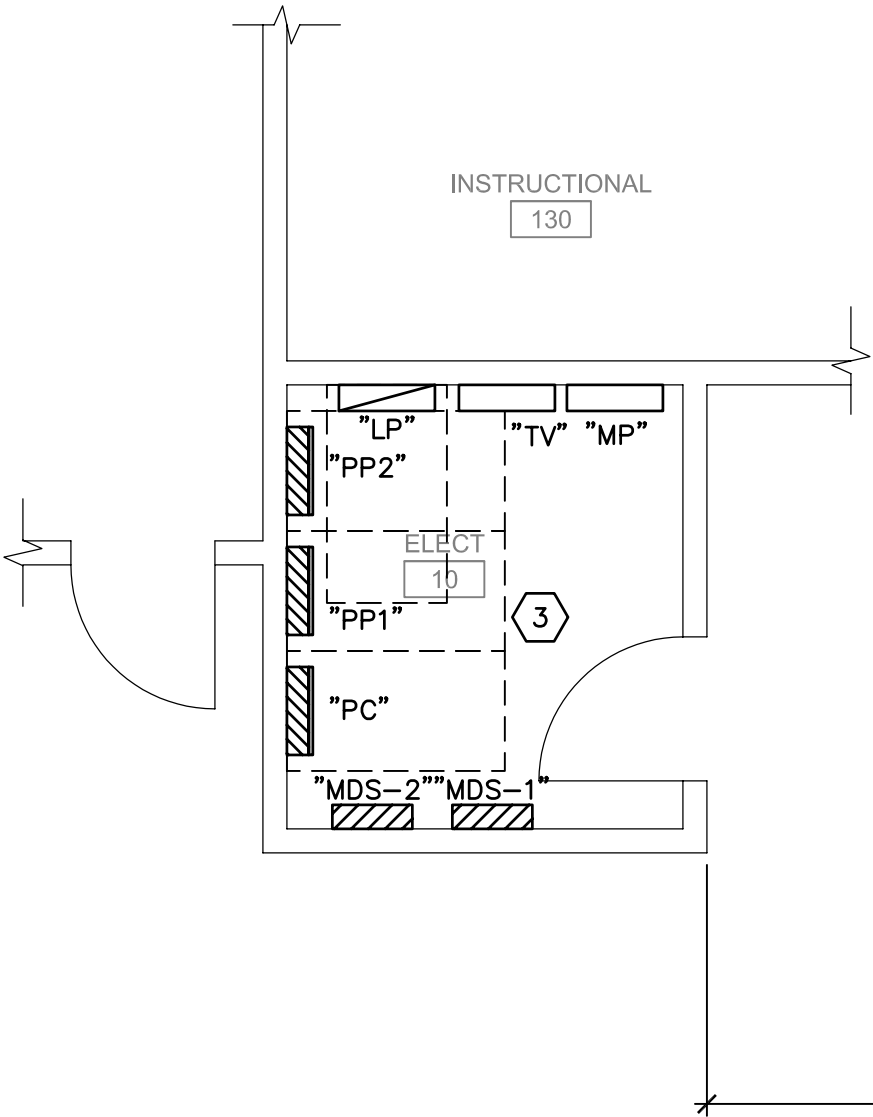
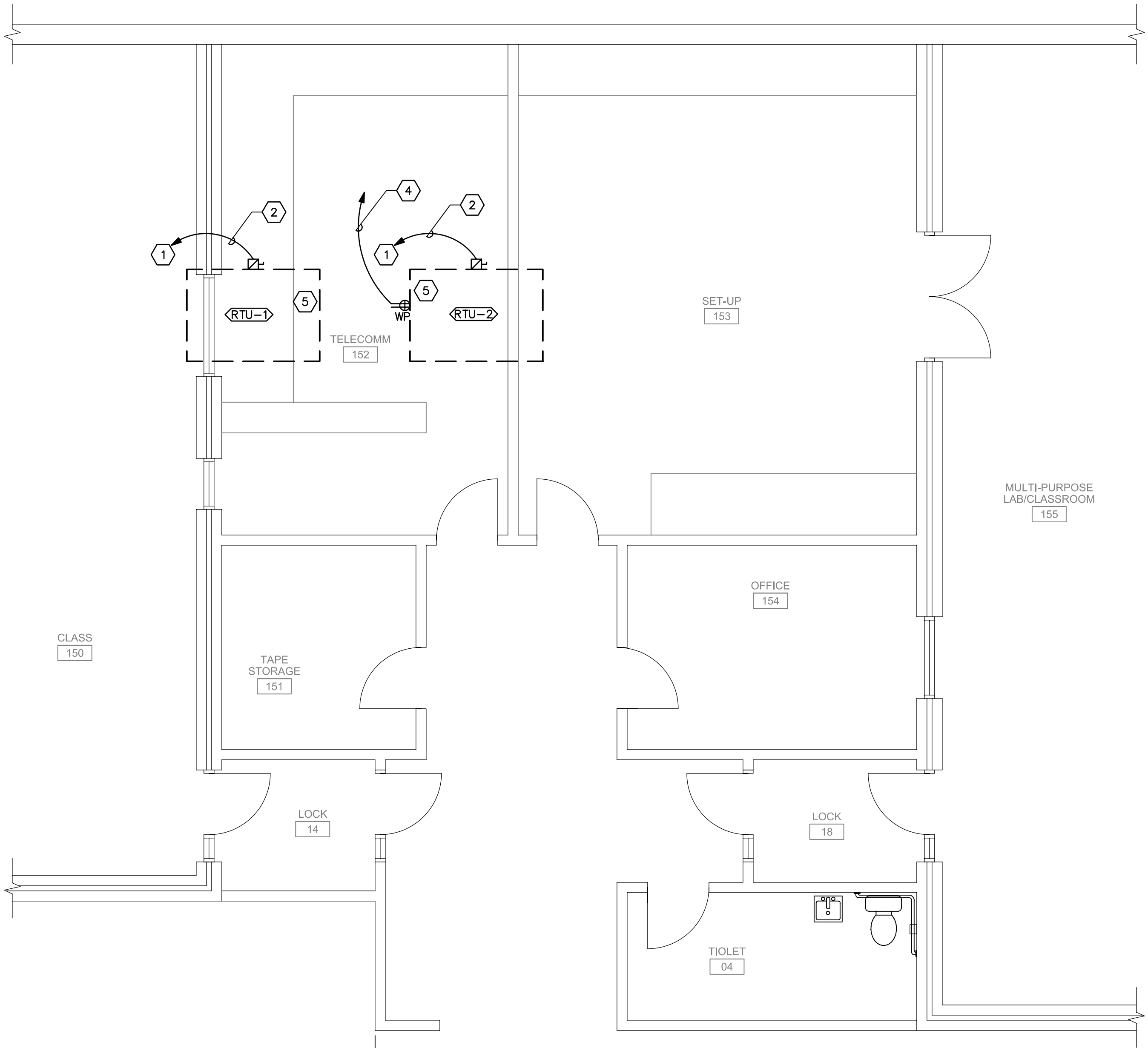
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SHEET 6 OF 6



A3 ELECTRICAL FLOOR PLAN

SCALE: 1/4" = 1'-0"